



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

**D2580-1**

**Job Sheet 171759**



**Part No:** D2580-1

**Job Qty:** 4 ea

**Part Name:** 205 Bent Tube



**Part Weight:** 0 lbs

**Status:** Scheduled

**Priority:** Medium

**Job Created:** 2/8/18

**Job Tracking No:**

**Due Date:** 3/9/18

**Created By:** Michelle Gagnon-Donovan

**Type:** Stock

**Description:**

**Note:** DWG REV G SHEETS 1,2,3,8 IPP B 01.11.08 Revised Step 9, 10, 12, and 13 SM IPP Rev:C 10.12.01 as per DEO D1 DD ver:ec

**Ship Via:**

### Bill of Materials

### Job Routing

| Op No | Operation          | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off    |
|-------|--------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|-------------|
|       |                    |       |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |             |
| 90    | Start up Operation | 4 Ea  | 3/8/18     | 3/8/18   | 0.00      | 0.00    | Start Up Skid tubes   |           | JH          |
| 100   | Skid tubes         | 4 pcs | 3/8/18     | 3/8/18   | 0.00      | 3.70    | Skid tubes            |           | JH M.G.     |
| 101   | QC                 | 4 pcs | 3/8/18     | 3/8/18   | 0.00      | 0.00    | QC6                   |           | BE          |
| 110   | HandFinish         | 4 pcs | 3/8/18     | 3/8/18   | 0.00      | 1.67    | HandFinish1           |           | SA 18-03-27 |
| 120   | QC                 | 4 pcs | 3/8/18     | 3/8/18   | 0.00      | 0.00    | QC7                   |           | BE          |
| 125   | Skid tubes         | 4 pcs | 3/9/18     | 3/9/18   | 0.00      | 3.70    | Skid tubes            |           | M.G.        |
| 130   | QC                 | 4 pcs | 3/9/18     | 3/9/18   | 0.00      | 0.00    | QC5                   |           | BE          |
| 140   | Packaging          | 4 pcs | 3/9/18     | 3/9/18   | 0.00      | 0.00    | Packaging3            |           | JH          |
| 150   | QC21-SA            | 4 Ea  | 3/9/18     | 3/9/18   | 0.00      | 0.00    | QC21                  |           | JH          |

Part Op 100 - 1- Inspect mat'l D2500-1-190 for damage. 2-Drill pilot holes using drill jig DT 8149 A-BC-D 3-Open holes to 0.508"  
Descriptions: as per Dwg D2580 4-Deburr holes per QSI002 section 4.2.3 and blow out all chips from inside of tube 5- Test fit inspection saddles on FWD & AFT saddle holes using DT9916.  
125 - 1- Bond web in place per QSI 015. A/R Sikaflex-291 batch: 138787 Sikaflex expire date: 18-04-21 Start time and date: 18-04-02 bond for 12hrs  
140 - LOCATION : LG002

### Job BOM

| Part / Item | Component Name          | Quantity    | Operation             | Container |
|-------------|-------------------------|-------------|-----------------------|-----------|
| D2500-1-190 | Ext'n - I' Beam Tube 4" | 4 Ea (1 ea) | 90-Start up Operation | S027162   |
| D2596       | Web, 205 Skid tube      | 4 Ea (1 ea) | 90-Start up Operation | S036656   |
|             |                         |             |                       | S057889   |

### Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | D2500-1-190    | 4        | 115       | 0         |
|                       | D2596          | 4        | 4         | 0         |

### Part Specifications

Specifications could not be found.

Plex 2/8/18 10:46 AM Dart.Gagnon.Michelle



**Container No: S054999**



**Part: D2580 – 1**

**Job No: 171759**

**Serial No/Batch: S054999**

**Revision: H**

**Inspector:**

**Dart Aerospace Ltd.**  
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**Date: 03/26/18**



| ITEM | QTY<br>-041 | QTY<br>-045 | QTY<br>-047 | QTY<br>-049 | PART NUMBER                                                               | DESCRIPTION         |
|------|-------------|-------------|-------------|-------------|---------------------------------------------------------------------------|---------------------|
| 1    | X           |             |             |             | D2580-041                                                                 | SKIDTUBE ASSEMBLY   |
| 2    |             | X           |             |             | D2580-045                                                                 | SKIDTUBE ASSEMBLY   |
| 3    |             |             | X           |             | D2580-047                                                                 | SKIDTUBE ASSEMBLY   |
| 4    |             |             |             | X           | D2580-049                                                                 | SKIDTUBE ASSEMBLY   |
| 20   | 1           | 1           | 1           | 1           | D2500-1-190                                                               | EXTRUSION           |
| 21   |             |             | 16          | 16          | D2570                                                                     | BUSHING             |
| 22   | 1           | 1           | 1           | 1           | D2575-3                                                                   | STEP                |
| 23   |             | 4           |             |             | D2579                                                                     | SPACER              |
| 24   | 16          | 16          | 8           | 8           | D2594-1                                                                   | PLUG                |
| 25   | 16          | 16          | 8           | 8           | D2594-3                                                                   | O-RING              |
| 26   | 1           | 1           | 1           | 1           | D2596                                                                     | 205 WEB             |
| 27   | 1           | 1           | 1           | 1           | D2555                                                                     | AFT CAP             |
| 28   | 1           | 1           |             |             | D3564-5                                                                   | WEARSHOE            |
| 29   | 1           | 1           |             |             | D3564-9                                                                   | WEARSHOE            |
| 30   | 1           | 1           |             |             | D3564-11                                                                  | WEARSHOE            |
| 31   | 1           | 1           |             |             | D3564-13                                                                  | WEARSHOE            |
| 32   | 20          | 20          | 24          | 24          | D4202-1                                                                   | SPACER              |
| 33   |             |             | 1           |             | D4405-041                                                                 | WEARPLATE ASSEMBLY  |
| 34   |             |             | 1           |             | D4405-043                                                                 | WEARPLATE ASSEMBLY  |
| 35   |             |             |             | 1           | D5051-1                                                                   | FWD WEARPLATE       |
| 36   |             |             |             | 1           | D5051-3                                                                   | AFT WEARPLATE       |
| 50   | 50          | 50          |             |             | ALS7-1032-130<br>or AKS7-1032-130<br>or AKS4-1032-130<br>or AELS-1032-130 | INSERT              |
| 51   | 50          | 50          |             |             | ANSC4A                                                                    | BOLT                |
| 52   | 2           | 2           | 2           | 2           | AN3-5A                                                                    | BOLT                |
| 53   |             |             | 8           | 8           | AN4-45A                                                                   | BOLT                |
| 54   | 50          | 50          |             |             | NAS1149C0332R                                                             | WASHER (AN990C10L)  |
| 55   | 2           | 2           | 2           | 2           | NAS1149D0332J                                                             | WASHER (AN990JD10L) |
| 56   |             |             | 8           | 8           | MS21042-4                                                                 | NUT (OR MS21042L4)  |

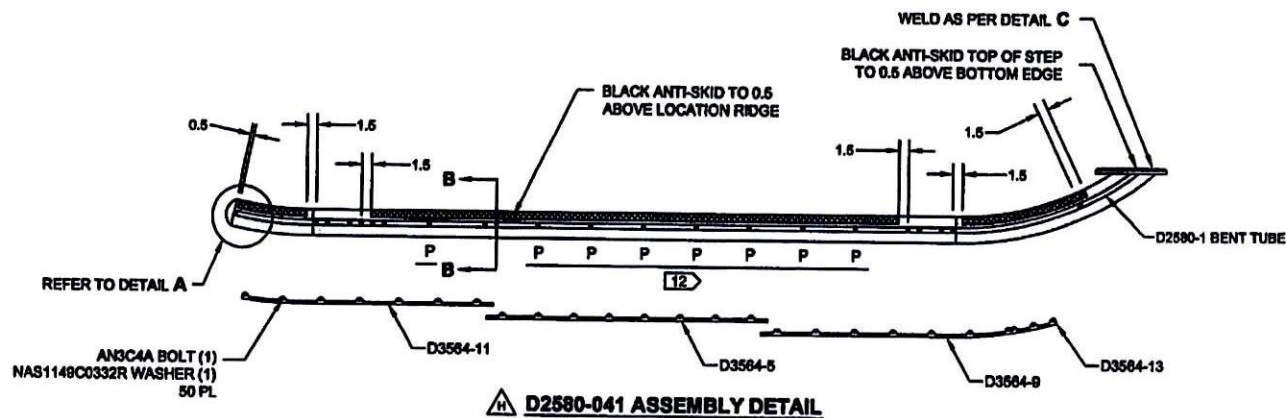
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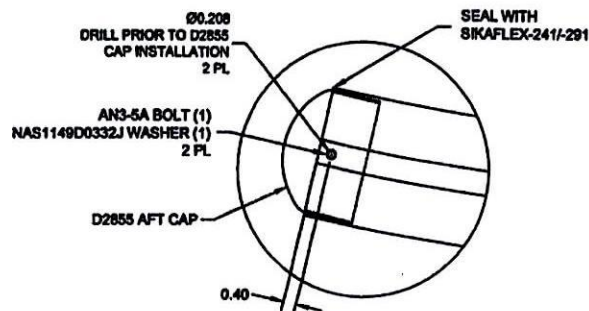
#### GENERAL NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT (-041/-047/-049) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3  
POWDER COAT (-045) GREEN SANDTEX (REF 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4.
- 3) TOLERANCES ARE PER DART QSI 015 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 33.7 lbs  
D2580-045 = 33.7 lbs  
D2580-047 = 45.1 lbs  
D2580-049 = 32.0 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8837 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL 20.287 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL ANSC4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/-291.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047/-049)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2555 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

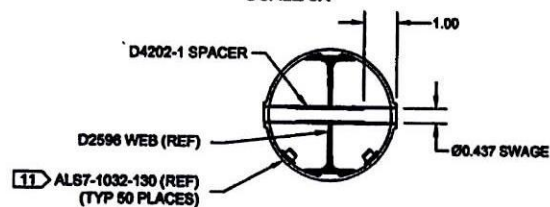
|            |                                                                                                                                                           |                                                                                                                                                                                                                                                                 |              |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| H          | SHEET : PL DELETE D3566-1/5-13 GASKETS, WEIGHTS UPDATED ACCORDINGLY. SHEETS 2 & 4 PICTORIAL UPDATE FOR REMOVAL OF GASKETS                                 | SAD                                                                                                                                                                                                                                                             | 17.06.09     |
| G          | ADDED -048, -047 WEIGHT UPDATED PER DSI 9596                                                                                                              | AJS                                                                                                                                                                                                                                                             | 14.04.09     |
| F          | INCORPORATE DEO D2580-E-1 PER PAR12-218                                                                                                                   | DC                                                                                                                                                                                                                                                              | 13.06.20     |
| E          | ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1) | RF                                                                                                                                                                                                                                                              | 11.06.21     |
| D          | CHANGE TO 8S WEARPLATES AND GASKETS, INCLUDE DEO 8124/ 8183                                                                                               | PH                                                                                                                                                                                                                                                              | 07.04.05     |
| C          | REDRAWN, INCLUDED DEO 8094/ 8097                                                                                                                          | CP                                                                                                                                                                                                                                                              | 06.06.26     |
| B          | AS MANUFACTURED                                                                                                                                           | DS                                                                                                                                                                                                                                                              | 06.12.02     |
| A          | NEW ISSUE                                                                                                                                                 | DS                                                                                                                                                                                                                                                              | 06.06.16     |
| REV.       | DESCRIPTION                                                                                                                                               | BY                                                                                                                                                                                                                                                              | DATE         |
| DESIGN     | DS                                                                                                                                                        | DART AEROSPACE LTD                                                                                                                                                                                                                                              |              |
| DRAWN      | SAD                                                                                                                                                       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                     |              |
| CHECKED    | <i>DS</i>                                                                                                                                                 | DRAWING NO.                                                                                                                                                                                                                                                     | REV. H       |
| MFG. APPR. | <i>DS</i>                                                                                                                                                 | D2580                                                                                                                                                                                                                                                           | SHEET 1 OF 9 |
| APPROVED   | <i>DS</i>                                                                                                                                                 | TITLE                                                                                                                                                                                                                                                           | SCALE        |
| DE APPR.   | <i>DS</i>                                                                                                                                                 | 205 SKIDTUBE ASSEMBLY                                                                                                                                                                                                                                           | NTS          |
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**DETAIL A**  
SCALE 5X

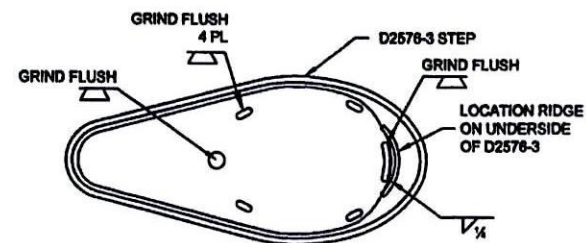


**SECTION B-B**  
SCALE 5X



AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:  
1. INSERT D4202-1 SPACER (20 PLACES)  
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002  
3. TRIM / GRIND FLUSH PER QSI 002

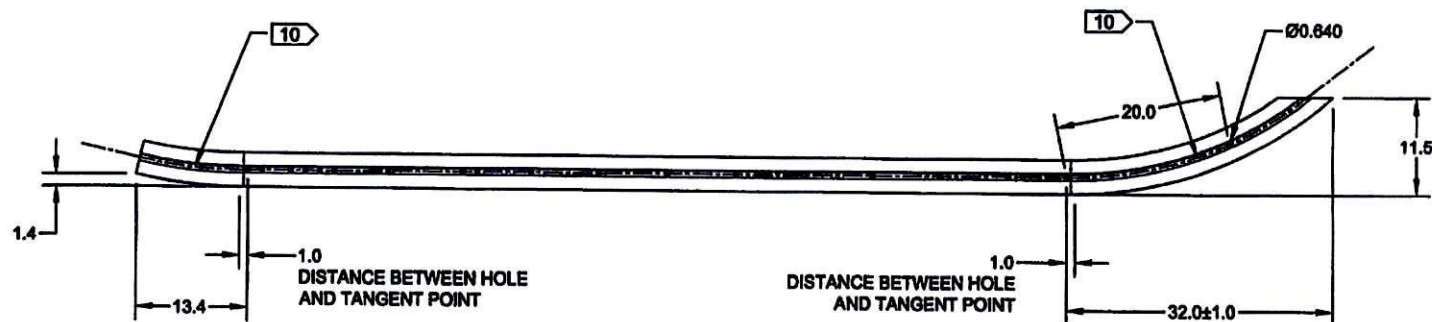
**DETAIL C**  
SCALE 5X



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| MFG. APPR.                                                                                                                                                                                                                    | <i>[Signature]</i> | D2580                                  | SHEET 2 OF 8 |
| APPROVED                                                                                                                                                                                                                      | <i>[Signature]</i> | TITLE                                  | SCALE        |
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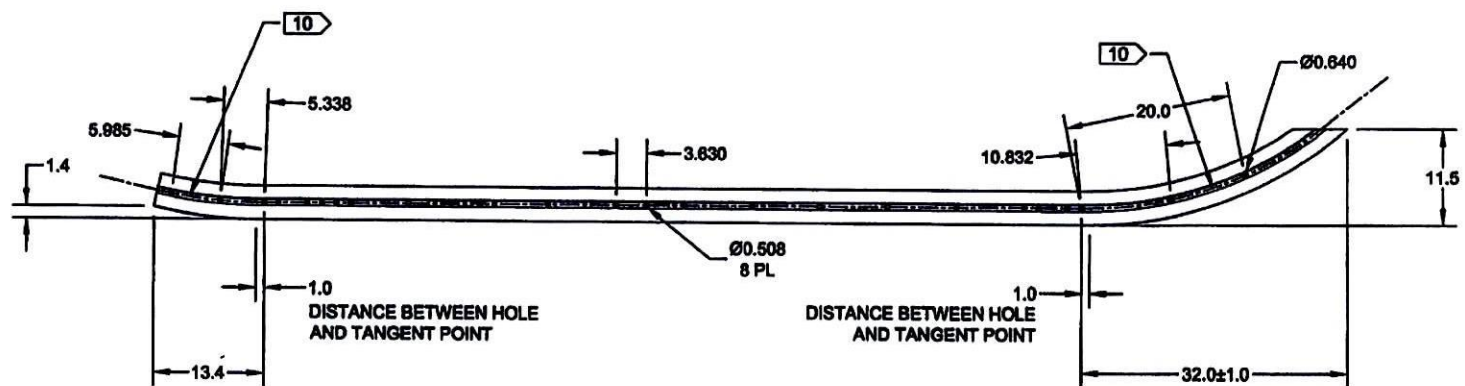


**D2580-1 BENT TUBE**  
(MAKE FROM D2580-101 TUBE)

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| MFG. APPR. | <i>[Signature]</i> | D2580                                                                                                                                                                                                                                                        | SHEET 3 OF 9 |
| APPROVED   | <i>[Signature]</i> | TITLE                                                                                                                                                                                                                                                        | SCALE        |
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**D2580-7 BENT TUBE**  
(MAKE FROM D2580-101 TUBE)

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|                                                                                                                                                                                                                         |                    |                                        |              |
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| MFG. APPR.                                                                                                                                                                                                              | <i>[Signature]</i> | D2580                                  | SHEET 8 OF 8 |
| APPROVED                                                                                                                                                                                                                | <i>[Signature]</i> | TITLE                                  | SCALE        |
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